**3D Printing in Biotechnology**

**Introduction:**

It is technique of making 3D bio objects that may solve the complex problems of humanity. Through this advancement in biotechnology we can cure diseased organs , damaged skin and many other problems which can’t be managed normally. This field of science allow Biofabrication , bioprinting , bioinks , biorobotics , electrospining etc.

This technique may help in implantable of medical devices.

**History:**

The technology for Printing physical 3D objects from digital data was first developed Charlis Hull in 1984.

He name the techniques a stereo lithography and obtained a patent for the technique in 1986.

By the end 1980s other similar technologies sach as fused depositions on modeling and selective laser sintering were introduced .

In 1993 , MIT patent an other technology named three dimensional printing technique which is similar to the inkjet technology used in 2D printer.

In 1996 , three major products , Genisys from Stratasys.

**Applications Of 3D Printing:**

There are certain applications of 3D printing available for different uses in our lives. Some of them given blow;

1. Bio Inks
2. Biofabrication of tissue
3. 3D printing in surgical context
4. Diagnostic use of 3D Printed Structure
5. Bio Robotics
6. Biological Actuators
7. Micro to macro Bio robotics

Group Member:

Qammar , Uzma , Junaid , Hamza , Zaka ul Rehman